

WHAT IS CLAIMED IS:

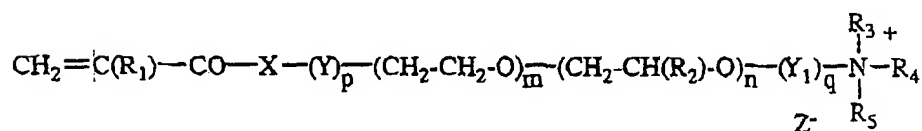
1. A composition for the oxidation dyeing of keratin fibers, comprising, in a suitable dyeing medium,

at least one oxidation dye,

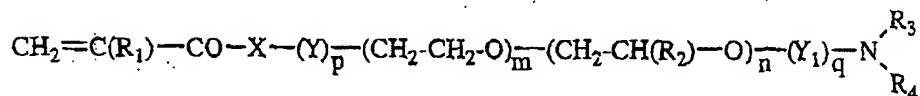
at least one C₁₀-C₁₄ fatty alcohol and

at least one cationic poly(vinyl lactam) polymer comprising:

- a) at least one monomer chosen from vinyl lactams and alkyl vinyl lactams;
- b) at least one monomer chosen from monomers of structures (Ia) or (Ib):



(Ia)



(Ib)

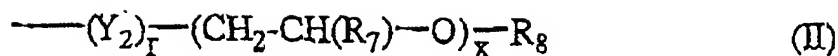
wherein:

X is chosen from an oxygen atom and NR₆ radicals,

R₁ and R₆, which may be identical or different, are chosen from hydrogen atoms, and linear and branched C₁-C₅ alkyl radicals,

R₂ is chosen from linear and branched C₁-C₄ alkyl radicals,

R₃, R₄ and R₅, which may be identical or different, are chosen from hydrogen atoms, linear and branched C₁-C₃₀ alkyl radicals, and radicals of formula (II):



wherein:

Y, Y₁ and Y₂, which may be identical or different, are chosen from linear and branched C₂-C₁₆ alkylene radicals,

R₇ is chosen from hydrogen atoms, linear and branched C₁-C₄ alkyl radicals, and linear and branched C₁-C₄ hydroxyalkyl radical,

R₈ is chosen from hydrogen atoms, linear and branched C₁-C₃₀ alkyl radicals,

p, q and r, which may be identical or different, are integers equal to the value zero, or the value 1,

m and n, which may be identical or different, are integers ranging from 0 to 100,

x is an integer ranging from 1 to 100,

Z is chosen from organic and inorganic acid anions,

provided that:

- at least one of the substituents R₃, R₄, R₅ or R₈ is chosen from linear and branched C₉-C₃₀ alkyl radicals,

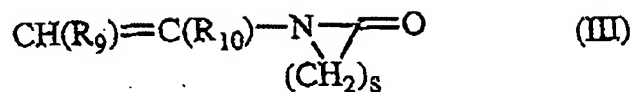
- if m or n is different from zero, then q is equal to 1,

- if m or n are equal to zero, then p or q is equal to 0.

2. The composition according to Claim 1, wherein the keratin fibers are hair.

3. The composition according to Claim 1, wherein the at least one monomer chosen from vinyl lactam and alkyl vinyl lactam monomers is a compound of

formula (III):



wherein:

s is an integer ranging from 3 to 6,

R₉ is chosen from hydrogen atoms and C₁-C₅ alkyl radicals,

R₁₀ is chosen from hydrogen atoms and C₁-C₅ alkyl radicals,

provided that at least one of the radicals R₉ and R₁₀ is an hydrogen atom.

4. The composition according to Claim 3, wherein the monomer of formula (III) is vinylpyrrolidone.

5. The composition according to Claim 1, wherein in formulae (Ia) or (Ib), the radicals R₃, R₄ and R₅, which may be identical or different, may be chosen from hydrogen atoms and linear and branched C₁-C₃₀ alkyl radicals.

6. The composition according to Claim 1, wherein the monomer b) is a monomer of formula (Ia).

7. The composition according to Claim 6, wherein in formula (Ia), m and n are equal to zero.

8. The composition according to Claim 1, wherein the counterion Z⁻ of the monomers of formula (Ia) is chosen from halide ions, phosphate ions, metho-sulphate ions, and tosylate ions.

9. The composition according to Claim 1, further comprising at least one additional monomer chosen from cationic and nonionic monomers.

10. The composition according to Claim 3, wherein the cationic poly(vinyl lactam) is a terpolymer comprising:

- a) one monomer of formula (III),
- b) one monomer of formula (Ia), wherein

$$p = 1, q = 0,$$

R_3 and R_4 , which may be identical or different, are chosen from hydrogen atoms and C_1 - C_5 alkyl radicals, and

R_5 is chosen from C_9 - C_{24} alkyl radicals, and

c) one monomer of formula (Ib) wherein R_3 and R_4 , which may be identical or different, are chosen from hydrogen atoms and C_1 - C_5 alkyl radicals.

11. The composition according to Claim 10, wherein the terpolymer comprises, by weight, 40 to 95% of monomer (a), 0.25 to 50% of monomer (b) and 0.1 to 55% of monomer (c).

12. The composition according to Claim 1, wherein the cationic poly(vinyl lactams) are chosen from the following terpolymers:

vinylpyrrolidone/dimethylaminopropylmethacrylamide/dodecyldimethylmethacrylamidopropylammonium tosylate;

vinylpyrrolidone/dimethylaminopropylmethacrylamide/cocoyldimethylmethacrylamidopropylammonium tosylate;

vinylpyrrolidone/dimethylaminopropylmethacrylamide/lauryldimethylmethacrylamidopropylammonium tosylate, and

vinylpyrrolidone/dimethylaminopropylmethacrylamide/lauryldimethylmethacrylamidopropylammonium chloride.

13. The composition according to Claim 1, wherein the weight-average molecular mass of the cationic poly(vinyl lactams) ranges from 500 to 20 000 000.

14. The composition according to Claim 13, wherein the weight-average molecular mass of the cationic poly(vinyl lactams) ranges from 200 000 to 2 000 000.

15. The composition according to Claim 14, wherein the weight-average molecular mass of the cationic poly(vinyl lactams) ranges from 400 000 to 800 000.

16. The composition according to Claim 1, wherein the cationic poly(vinyl lactam) and poly(vinyl lactams) are present in the composition in an amount ranging from 0.01 to 10% by weight, relative to the total weight of the composition.

17. The composition according to Claim 16, wherein the cationic poly(vinyl lactam) and poly(vinyl lactams) are present in the composition in an amount ranging from 0.1 to 5% by weight, relative to the total weight of the composition.

18. The composition according to Claim 1, wherein the C₁₀-C₁₄ fatty alcohol is a nonpolyoxyalkylenated fatty alcohol.

19. The composition according to Claim 1, wherein the C₁₀-C₁₄ fatty alcohol is a polyoxyalkylenated fatty alcohol.

20. The composition according to Claim 19, wherein the C₁₀-C₁₄ fatty alcohol is a polyoxyethylenated fatty alcohol comprising from 2 to 20 oxyethylene (EO) units.

21. The composition according to Claim 20, wherein the C₁₀-C₁₄ fatty alcohol is a polyoxyethylenated fatty alcohol comprising from 3 to 15 oxyethylene (EO) units.

22. The composition according to Claim 21, wherein the C₁₀-C₁₄ fatty alcohol is oxyethylenated 12 EO lauryl alcohol.

23. The composition according to Claim 21, wherein the C₁₀-C₁₄ fatty alcohol is oxyethylenated 3 EO capryl alcohol.

24. The composition according to Claim 1, wherein the at least one C₁₀-C₁₄ fatty alcohol is present in the composition in an amount ranging from 0.1 to 40%, by weight, relative to the total weight of the composition.

25. The composition according to Claim 24, wherein the at least one C₁₀-C₁₄ fatty alcohol is present in the composition in an amount ranging from 2 to 25%, by weight, relative to the total weight of the composition.

26. The composition according to Claim 25, wherein the at least one C₁₀-C₁₄ fatty alcohol is present in the composition in an amount ranging from 5 to 20% by weight, relative to the total weight of the composition.

27. The composition according to Claim 1, wherein the at least one oxidation dye is chosen from at least one oxidation base and at least one coupler and the acid addition salts thereof.

28. The composition according to Claim 27, wherein the at least one oxidation dye is chosen from at least one oxidation base and the acid addition salts thereof.

29. The composition according to Claim 27, wherein the at least one oxidation base is chosen from para-phenylenediamines, double bases, ortho-aminophenols, para-aminophenols, heterocyclic bases, and the acid addition salts thereof.

30. The composition according to Claim 28, wherein the at least one oxidation base is present in an amount ranging from 0.0005 to 20% by weight, relative to the total weight of the composition.

31. The composition according to Claim 27, wherein the at least one coupler is chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols, heterocyclic couplers, and the acid addition salts thereof.

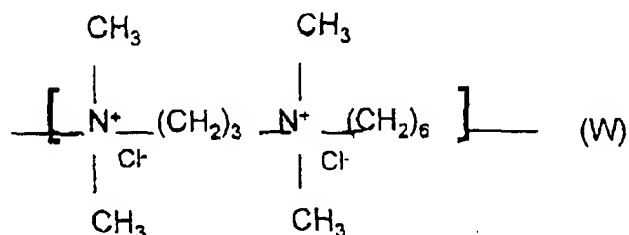
32. The composition according to Claim 27, wherein the at least one coupler is present in an amount ranging from 0.0001 to 20% by weight, relative to the total weight of the composition.

33. The composition according to Claim 27, wherein the acid addition salts of the at least one oxidation dye are chosen from hydrochlorides, hydrobromides, tartrates, sulphates, lactates and acetates.

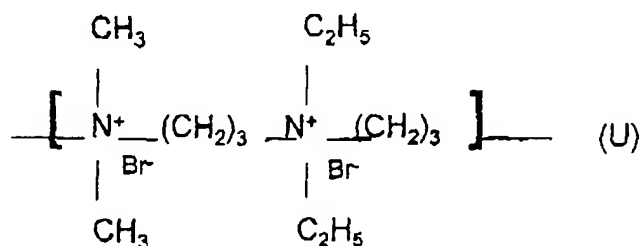
34. The composition according to Claim 1, further comprising at least one direct dye.

35. The composition according to Claim 1, further comprising at least one additional polymer chosen from at least one amphoteric polymer and at least one cationic polymer, provided that the cationic polymers are different from the at least one cationic poly(vinyl lactam) polymer defined in Claim 1.

36. The composition according to Claim 35, wherein the at least one additional cationic polymer is a quaternary polyammonium polymer comprising recurring units corresponding to the formula (W):



37. The composition according to Claim 35, wherein the at least one additional cationic polymer is a quaternary polyammonium polymer comprising recurring units corresponding to the formula (U):



38. The composition according to Claim 35, wherein the at least one amphoteric polymer is a copolymer comprising as monomers at least acrylic acid and a salt of dimethyldiallylammonium.

39. The composition according to Claim 35, wherein the at least one additional polymer is present in the composition in an amount ranging from 0.01% to 10%, by weight, relative to the total weight of the composition.

40. The composition according to Claim 39, wherein the at least one additional polymer is present in the composition in an amount ranging from 0.05% to 5%, by weight, relative to the total weight of the composition.

41. The composition according to claim 40, wherein the at least one additional polymer is present in the composition in an amount ranging from 0.1% to 3% by weight, relative to the total weight of the composition.

42. The composition according to Claim 1, further comprising at least one surfactant chosen from anionic, cationic, nonionic and amphoteric surfactants.

43. The composition according to Claim 42, wherein the at least one surfactant is present in the composition in an amount ranging from 0.01 to 40% by weight, relative to the total weight of the composition.

44. The composition according to Claim 43, wherein the at least one surfactant is present in the composition in an amount ranging from 0.5 to 30% by weight, relative to the total weight of the composition.

45. The composition according to Claim 1, further comprising at least one additional thickening agent.

46. The composition according to Claim 1, further comprising at least one reducing agent.

47. The composition according to Claim 47, wherein the at least one reducing agent is present in the composition in an amount ranging from 0.05 to 3% by weight, relative to the total weight of the composition.

48. The composition according to Claim 1, further comprising at least one oxidizing agent.

49. The composition according to Claim 48, wherein the at least one oxidizing agent is chosen from hydrogen peroxide, urea peroxide, alkali metal bromates, ferricyanides, persalts, and oxidation-reduction enzymes that may optionally be used with their respective donor or cofactor.

50. The composition according to Claim 49, wherein the at least one oxidizing agent is hydrogen peroxide.

51. The composition according to Claim 50, wherein the at least one oxidizing agent is a hydrogen peroxide solution whose titre ranges from 1 to 40 volumes.

52. The composition according to Claim 48, wherein it has a pH ranging from 4 to 11.

53. A process for dyeing keratin fibers, comprising applying to the fibers at least one composition A comprising, in an suitable dyeing medium, at least one oxidation dye,

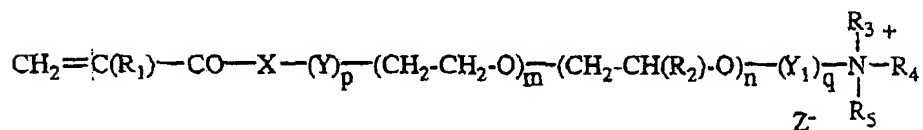
a composition B containing at least one oxidizing agent, which can develop the color at alkaline, neutral or acidic pH, and

wherein composition A and composition B may be mixed just before application to the fibers, or applied sequentially without intermediate rinsing,

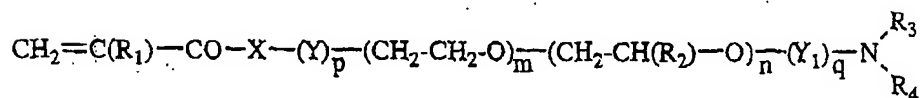
and wherein at least one of compositions A and B further comprise at least one C₁₀-C₁₄ fatty alcohol and at least one cationic poly(vinyl lactam) polymer comprising:

-a) at least one monomer chosen from vinyl lactams and alkyl vinyl lactams; and

-b) at least one monomer chosen from monomers of structures (Ia) or (Ib):



(Ia)



(Ib)

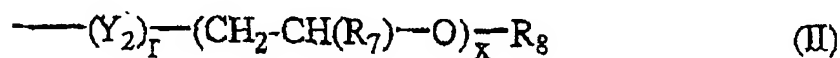
wherein:

X is chosen from an oxygen atom and NR₆ radicals,

R₁ and R₆, which may be identical or different, are chosen from hydrogen atoms, linear and branched C₁-C₅ alkyl radicals,

R₂ is chosen from linear and branched C₁-C₄ alkyl radicals,

R₃, R₄ and R₅, which may be identical or different, are chosen from hydrogen atoms, linear and branched C₁-C₃₀ alkyl radicals, and radicals of formula (II):



wherein:

Y, Y₁ and Y₂, which may be identical or different, are chosen from linear and branched C₂-C₁₆ alkylene radicals,

R₇ is chosen from hydrogen atoms, linear and branched C₁-C₄ alkyl radicals, and linear and branched C₁-C₄ hydroxyalkyl radical,

R₈ is chosen from hydrogen atoms, linear and branched C₁-C₃₀ alkyl radicals,

p, q and r, which may be identical or different, are integers equal to the value zero, or the value 1,

m and n, which may be identical or different, are integers ranging from 0 to 100,

x is an integer ranging from 1 to 100,

Z is chosen from organic and inorganic acid anions,

provided that:

- at least one of the substituents R₃, R₄, R₅ or R₈ is chosen from linear

and branched C₉-C₃₀ alkyl radicals,

- if m or n is different from zero, then q is equal to 1,
- if m or n are equal to zero, then p or q is equal to 0.

54. The process according to Claim 53, wherein the human keratin fibers to be dyed are hair.

55. The process according to Claim 53, further comprising
applying the ready-to-use composition, freshly prepared at the time of use
from the compositions (A) and (B), to dry or wet keratin fibers,
allowing the composition to act for an exposure time ranging from 1 to
60 minutes,

rinsing the composition from the fibers,
optionally washing the fibers with shampoo,
optionally rinsing the fibers again, and
optionally drying the fibers.

56. The process according to Claim 55, wherein the exposure time ranges
from 10 to 45 minutes,

57. A two-compartment kit for dyeing keratin fibers, wherein
at least one compartment comprises at least one composition A1 comprising,
in an appropriate dyeing medium, at least one oxidation dye, and
at least one other compartment comprises a composition B1 comprising, in a
suitable dyeing medium, an oxidizing agent and at least one cationic
poly(vinyl lactam) polymer,

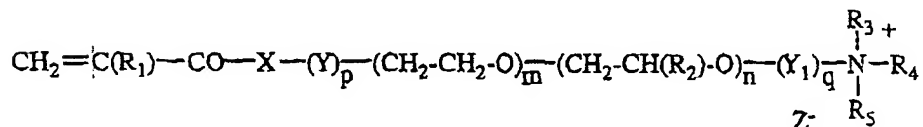
and at least one of the compositions A1 and B1 further comprises at least one
C₁₀-C₁₄ fatty alcohol,

wherein said at least one cationic poly(vinyl lactam) polymer comprises

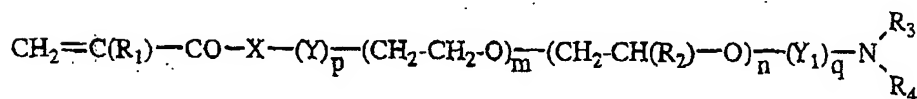
-a) at least one monomer chosen from vinyl lactams and alkyl vinyl lactams;

and

-b) at least one monomer chosen from monomers of structure (Ia) or (Ib):



(Ia)



(Ib)

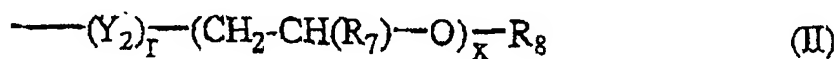
wherein:

X is chosen from an oxygen atom and NR₆ radicals,

R₁ and R₆, which may be identical or different, are chosen from hydrogen atoms, linear and branched C₁-C₅ alkyl radicals,

R₂ is chosen from linear and branched C₁-C₄ alkyl radicals,

R₃, R₄ and R₅, which may be identical or different, are chosen from hydrogen atoms, linear and branched C₁-C₃₀ alkyl radicals, and radicals of formula (II):



wherein:

Y, Y₁ and Y₂, which may be identical or different, are chosen from linear and branched C₂-C₁₆ alkylene radicals,

R₇ is chosen from hydrogen atoms, linear and branched C₁-C₄ alkyl radicals, and linear and branched C₁-C₄ hydroxyalkyl radical,

R₈ is chosen from hydrogen atoms, linear and branched C₁-C₃₀ alkyl radicals,

p, q and r, which may be identical or different, are integers equal to the value zero, or the value 1,

m and n, which may be identical or different, are integers ranging from 0 to 100,

x is an integer ranging from 1 to 100,

Z is chosen from organic and inorganic acid anions,

provided that:

- at least one of the substituents R₃, R₄, R₅ or R₈ is chosen from linear and branched C₉-C₃₀ alkyl radicals,

- if m or n is different from zero, then q is equal to 1, and

- if m or n are equal to zero, then p or q is equal to 0.

58. The two-compartment kit for dyeing keratin fibers according to Claim 57, wherein the keratin fibers are hair.

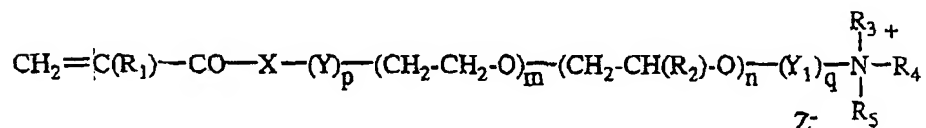
59. A multi-compartment kit for dyeing keratin fibers wherein at least one first compartment comprises a composition A2 comprising, in a suitable dyeing medium, at least one oxidation dye, and optionally at least one C₁₀-C₁₄ fatty alcohol;

at least one second compartment comprising a composition B2 comprising, in a suitable dyeing medium, at least one oxidizing agent, and optionally at least one

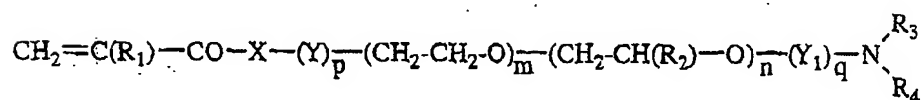
C₁₀-C₁₄ fatty alcohol;

at least one third compartment comprising a composition C2 comprising, in a suitable dyeing medium, at least one cationic poly(vinyl lactam) polymer comprising:

- a) at least one monomer chosen from vinyl lactams and alkyl vinyl lactams;
- b) at least one monomer chosen from monomers of structures (Ia) or (Ib):



(Ia)



(Ib)

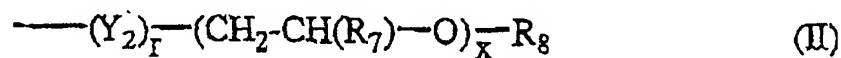
wherein:

X is chosen from an oxygen atom and NR₆ radicals,

R₁ and R₆, which may be identical or different, are chosen from hydrogen atoms, linear and branched C₁-C₅ alkyl radicals,

R₂ is chosen from linear and branched C₁-C₄ alkyl radicals,

R₃, R₄ and R₅, which may be identical or different, are chosen from hydrogen atoms, linear and branched C₁-C₃₀ alkyl radicals, and radicals of formula (II):



wherein:

Y, Y₁ and Y₂, which may be identical or different, are chosen from linear and branched C₂-C₁₆ alkylene radicals,

R₇ is chosen from hydrogen atoms, linear and branched C₁-C₄ alkyl radicals, and linear and branched C₁-C₄ hydroxyalkyl radicals,

R₈ is chosen from hydrogen atoms, linear and branched C₁-C₃₀ alkyl radicals,

p, q and r, which may be identical or different, are integers equal to the value zero, or the value 1,

m and n, which may be identical or different, are integers ranging from 0 to 100,

x is an integer ranging from 1 to 100,

Z is chosen from organic and inorganic acid anions,

provided that:

- at least one of the substituents R₃, R₄, R₅ or R₈ is chosen from linear and branched C₉-C₃₀ alkyl radicals,

- if m or n is different from zero, then q is equal to 1, and

- if m or n are equal to zero, then p or q is equal to 0.